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# THE 3 CAUSES OF DATA BREACHES IN EDUCATION— AND HOW TO PREVENT THEM

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# The 3 causes of data breaches in education—and how to prevent them

By Ben Reed, Product Marketing Manager

Security breaches have become a weekly occurrence in the news cycle, which has caused businesses to start asking questions. How are they happening? Is my business at risk?

Educational institutions should be asking the same questions.

The short answer is yes, your school is at risk. Not only is your school at risk, but the per capita cost of a data breach in education is the second highest of all industries.<sup>1</sup>

Here's an overview on how data breaches occur, why they're on the rise, and what steps to take now to protect your school.

According to the Ponemon Institute, data breaches can be broken down into three separate categories: IT and business process failures, human error, and malicious attacks.

<sup>1</sup> 2016 Cost of Data Breach Study, Ponemon Institute

## ROOT CAUSE OF DATA BREACHES

### HUMAN ERROR



28%

### PROCESS FAILURE



25%

### MALICIOUS



47%

Ponemon Institute 2017 Cost of Data Breach Study: Global Analysis

IT and business process failures accounted for 25 percent of the incidents in 2017. These kinds of breaches occur when a company purchases a security solution such as antivirus software or encryption, but doesn't keep it updated or enforce related security policies over the years. They also occur when a company purchases a security product but never implements it.

Human error, which can include someone leaving a computer unlocked, writing a password on a sticky note, or losing a device, accounted for 28 percent of breaches. Interestingly, 73 percent of devices that were lost or stolen were in the owner's work area or car.<sup>2</sup>

The final category, malicious attacks, comprises the remaining 47 percent of breaches. Most people are aware of this category because "hacking" gets a lot of attention in the news. However, actual hacking is a very small subset of total malicious breaches at just 19 percent. (Most hackers gain access to computers by simply guessing weak or default passwords, or by stealing them.)

The majority (51 percent) of malicious breaches are attributable to malware, such as viruses.

<sup>2</sup> Verizon Data Breach Investigations Report, 2016

## MALICIOUS BREACHES OVERVIEW



62%

BREACHES FEATURED HACKING



51%

BREACHES INCLUDED MALWARE



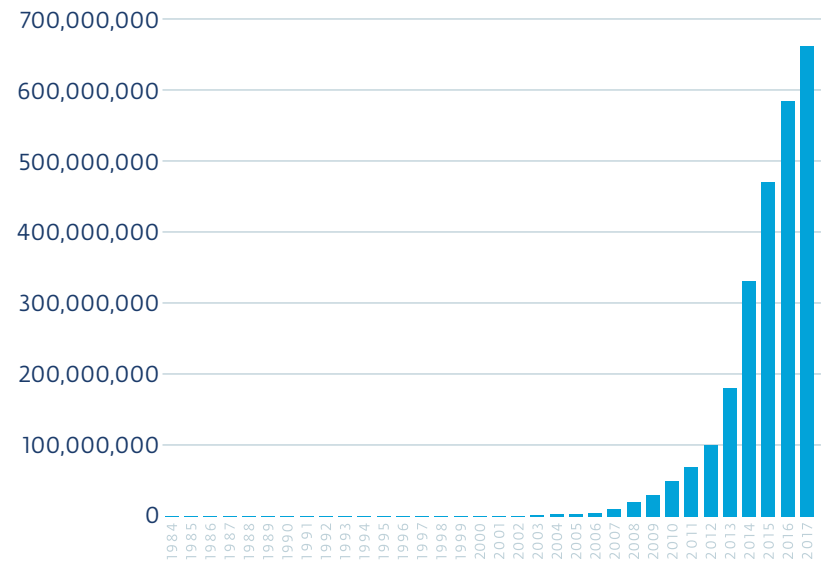
81%

HACKING RELATED BREACHES LEVERAGED  
STOLEN AND/OR WEAK PASSWORDS

Verizon 2017 Data Breach Investigations Report—specifically: incidents involving credentials

Malware is becoming more of a problem, as the number of malware strains typically doubles every 12 to 16 months. Currently, the independent testing facility AV-Test sees around 390,000 new malicious items per day. Also, malware is no longer specific to Windows computers—it also targets Mac and Linux with programs developed specifically to attack these operating systems. Because Mac and Linux users tend not to have any antivirus protection, when malware is written for these platforms it has a very high penetration and infection rate.

## TOTAL MALWARE BY YEAR



AV-TEST GmbH, [www.av-test.org](http://www.av-test.org)

Last update: September 21, 2017

For schools, malware is even more of a concern due to the fact that an educational institution sees an average of 2,332 malware events per week.<sup>3</sup> This could be due to budgetary restrictions affecting security software choices, or because students are surfing the internet instead of doing schoolwork.

So: how best to protect your school, computers, and data from these different threat vectors? Here are some basics. Overall, your best bet is to implement a multilayered security strategy that can prevent, detect, and eradicate threats as well as protecting your data, systems, and users.

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<sup>3</sup> Verizon Data Breach Investigations Report, 2015

## Malicious attacks

Implement endpoint security solutions that will protect against viruses, ransomware and other types of malware. For added security and convenience, look for a solution with cross-platform capability that can be easily managed. ESET's award-winning endpoint threat protection provides comprehensive security that can be managed from a single console with [ESET Remote Administrator](#).

ESET Endpoint Security features Web Control to limit students' access to websites and block inappropriate content. Because Web Control is local to the endpoint, it cannot be bypassed with proxies and VPNs. This allows you to spend more time focusing on other IT tasks rather than putting rules in place to block the newest VPN or proxy site.

## Hacking

Protect against weak or shared passwords with two-factor authentication (2FA). [ESET Secure Authentication](#) offers easy-to-implement 2FA, which can protect local desktop logins, remote desktops, VPNs and devices.

## Social engineering

[ESET Mail Security](#) ties directly into your exchange server and protects users from phishing schemes and spam emails. Using a cloud provider? [ESET Endpoint Security](#) products provide the same level of protection at the email client level, and also feature web access protection to prevent users from visiting potentially harmful websites.

## Lost devices

One of the smartest security moves you can make is to encrypt computers, flash drives and emails so that your data is protected from unauthorized users. [ESET Endpoint Encryption](#) will help ensure that your data is inaccessible, even if a flash drive or mobile device is lost or stolen.

## IT issues and process failure

What would you do if a natural disaster or power failure crashed your computers? Be sure to have a backup and recovery system in place that can quickly restore your data, apps and systems. And make sure the security software you choose comes with good customer support. ESET provides free, U.S.-based tech support to help keep you running smoothly 24/7.

## About the author

With 10 years of experience in both small and large organizations, Ben Reed has quickly grown through the IT ranks. He has held numerous positions in IT including help desk, system administrator and solutions engineer. He is current product marketing manager for ESET North America.

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